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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,424	07/21/2003	Thomas J. Holman	42P15881	7260

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EXAMINER

ABRAHAM, ESAW T

ART UNIT

PAPER NUMBER

2133

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/624,424

Applicant(s)

HOLMAN, THOMAS J.

Examiner

Esaw T. Abraham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07/21/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-29 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. <u>06/14/06</u> . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Election / Restriction

Restriction to one of the following invention is required under 35 U.S.C. 121

- I. Claims 1-6, drawn to: a method for forming an adjacent symbol codeword comprising generating a set of m bits, wherein m is an integer, of a first symbol and a set of m bits of a second symbol from a first set of data during a first clock phase, and generating a set of n bits, wherein n is an integer, of the first symbol and a set of n bits of the second symbol from a second set of data during a second clock phase classified in 714/752.
- II. Claims 7-12, drawn to: a method for testing a memory comprising generating a plurality of check bits to append to data that is forwarded to the memory; generating an adjacent symbol codeword based at least in part on data received from the memory; decoding the adjacent symbol codeword; and determining whether an error exists in the memory classified in 714/718.
- III. Claims 13-29, drawn to an apparatus for an Error Correcting Code comprising: check bits to the set of data that is to be forwarded to a memory; a second logic to receive a codeword from the memory and to generate a syndrome based on the codeword, and to detect whether an error exists based on the syndrome, a first logic to generate a plurality of check bits based on a set of data, to append the a third logic to classify the error if it exists, and a fourth logic to correct the error if it exists (as in claim 13), an apparatus to classify an error from a memory

comprising a first logic to generate an H matrix syndrome; and to determine whether an error exists based on the syndrome, if so, to classify an error type of the error (as in claim 19), and a system comprising: a processor, coupled to a memory and a chipset, to generate an operation to the memory via the chipset', and the chipset to utilize an Error Correcting Code (ECC) based on an adjacent symbol codeword that is formed in two clock phases and to determine whether an error exists in a plurality of data received by the chipset from the memory, if so, to classify a type of the error based on an H matrix syndrome classified in 714/785.

The invention are distinct, each from the other because of the following reasons:

Invention Group I, II and Group III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they are different modes of operation. Different function or different effects (MPEP 806.04, MPEP 808.01).

In the instant case for the different inventions; the invention Group I is forming an adjacent symbol (ECC code) and generating a set of m bits during the first and second clock phase (see claim 1) is completely different effect and a completely different mode of operation from the invention of Group II ((a method of testing a memory and generating check bits and ECC cods) (see claim 7)), Group III (an apparatus and error correcting code, a first logic to generating check bits and a second logic to receive a codeword to generate a syndrome based on the codeword [emphasis added] (see claim 13), an apparatus for classifying an error and a first logic to generate a matrix syndrome (see claim 19), a system comprising a processor and

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including a chipset to utilize an ECC based on an adjacent symbol codeword and to classify a type of the error based on a matrix syndrome (see claim 26).

Because these inventions are distinct for the reason given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reason given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reason given above and the reasons given above and search required for Group II is not for Group I, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reason given above and the reasons given above and search required for Group I is not for Group III, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reason given above and the reasons given above and search required for Group II is not for Group I, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reason given above and the reasons given above and search required for Group II is not for Group III, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reason given above and the reasons given above and search required for Group III is not for Group I, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reason given above and the reasons given above and search required for Group III is not for Group II, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

A telephone call was made to Gregory D. Caldwell on 06/14/06 to request an election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement is traversed (37 CFR 1.143).

Applicant is reminded that upon cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the specification. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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Any inquiry concerning this communication or either communications from the examiner should be directed to Esaw Abraham whose telephone number (571) 272-3812. The examiner can normally be reached on M-F 8-5.


If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, Albert DeCady can be reached on (571) 271-3819. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for after final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-directet.uspto.gov>. should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Esaw Abraham

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